

Geometry Unit 12 Worksheet #2 – Central Angles and Arcs

For #1 - 8, find the measure of the following arcs using the circle at the right.

1.  $m\widehat{PQ} = 90^\circ$

2.  $m\widehat{PQR} = 180^\circ$

3.  $m\widehat{TU} = 50^\circ$

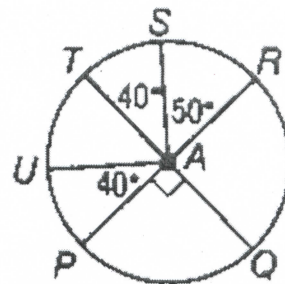
4.  $m\widehat{PS} = 130^\circ$

5.  $m\widehat{US} = 90^\circ$

6.  $m\widehat{PRQ} = 270^\circ$

7.  $m\widehat{UTQ} = 230^\circ$

8.  $m\widehat{UPS} = 270^\circ$



For #9-16, find the measure of the arcs using the picture at the right.

9.  $m\widehat{EA} = 50^\circ$

10.  $m\widehat{AB} = 130^\circ$

11.  $m\widehat{EAB} = 180^\circ$

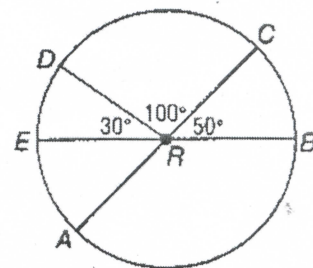
12.  $m\widehat{EAC} = 230^\circ$

13.  $m\widehat{DEB} = 210^\circ$

14.  $m\widehat{CDA} = 180^\circ$

15.  $m\widehat{CDB} = 310^\circ$

16.  $m\widehat{BCA} = 230^\circ$



For #17 - 24, PR and QS are diameters. Find the measures of the arcs.

17.  $m\widehat{PQ} = 42^\circ$

18.  $m\widehat{ST} = 74^\circ$

19.  $m\widehat{TPS} = 286^\circ$

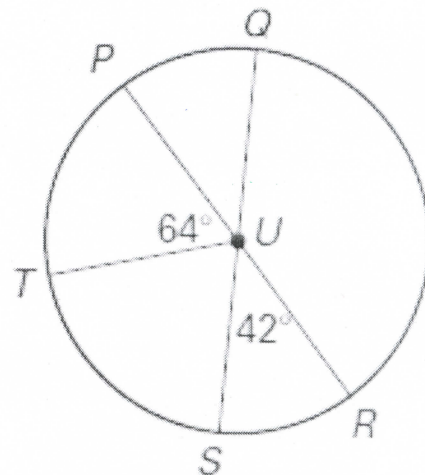
20.  $m\widehat{RT} = 116^\circ$

21.  $m\widehat{RQS} = 318^\circ$

22.  $m\widehat{TQR} = 244^\circ$

23.  $m\widehat{PS} = 138^\circ$

24.  $m\widehat{PTR} = 180^\circ$



Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Identifying Arcs

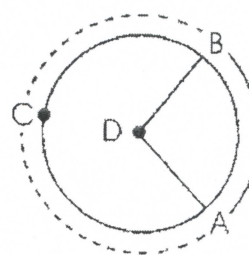
**Arc**—a continuous portion of a circle's circumference; minor arcs are named with the two points that make the arc; major arcs are named with the three points that make the arc.

**Central Angle**—an angle with a vertex in the center of a circle;  $\angle BDA$  is a central angle.

**Minor Arc**—an arc created by a central angle with a measure less than or equal to  $180^\circ$ ;  $\widehat{BA}$  is a minor arc.

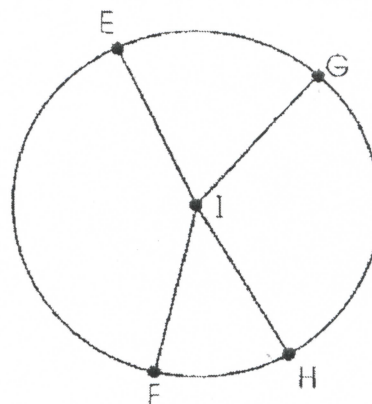
**Major Arc**—an arc created by a central angle with a measure greater than  $180^\circ$ .  $\widehat{BCA}$  is a major arc.

## Geometric Figures



Use the figure to the right to identify each angle or arc by writing *central angle*, *minor arc*, or *major arc*.

1.  $\angle GIH$  CENTRAL ANGLE
2.  $\widehat{EFG}$  MAJOR ARC
3.  $\widehat{EG}$  MINOR ARC
4.  $\widehat{GH}$  MINOR ARC
5.  $\widehat{FGE}$  MAJOR ARC
6.  $\widehat{HF}$  MINOR ARC
7.  $\angle HIF$  CENTRAL ANGLE
8.  $\angle EIG$  CENTRAL ANGLE



Use the figure to the right to identify each angle or arc by writing *central angle*, *minor arc*, or *major arc*.

9.  $\angle XZQ$  CENTRAL ANGLE
10.  $\widehat{XR}$  MINOR ARC
11.  $\widehat{XPY}$  MAJOR ARC
12.  $\widehat{QR}$  MINOR ARC
13.  $\widehat{RPQ}$  MAJOR ARC
14.  $\widehat{RP}$  MINOR ARC
15.  $\widehat{RYQ}$  MAJOR ARC

